

Title:	Catch Restrictions on Local Fish
Subject:	Population recovery of fish stocks
Author:	Rob Yeomans
Grade Level:	High School
Time Duration:	Two 90 minute blocks or two 45 minute periods
Overview:	Students will understand the concept of size restrictions on recreational and commercial fisheries by researching and presenting their findings to the class. One of the species will be the Atlantic sturgeon. The class will then compare other species' restrictions to the sturgeon's and determine why these restrictions are in place and if that alone will quickly allow the sturgeon population to rebound.
Objectives:	<p>Students will be able to:</p> <ul style="list-style-type: none"> • List commercially important fish species • Research the catch restrictions on recreational and commercial fisheries • Relate the restrictions to the biology of the related species • Compare the restrictions of most species to that of the Atlantic sturgeon • Determine, based on their biology, whether these restrictions will quickly allow the sturgeon population to rebound.
Materials:	Poster paper, colored pencils, magic markers (art supplies)
Procedure:	<p>(last 15 minutes of class)</p> <ol style="list-style-type: none"> 1. Ask the students to list as many commercially important fish species as possible. Teacher should write them on the board. 2. When finished, teacher should also include the sturgeon. The list should be large enough so that there is one seafood species per student. 3. Have each student choose a species. Tell the students they are to create posters that have: <ul style="list-style-type: none"> • Title that includes the name of their species • Organism's scientific name (written correctly) • Description of geographic location and range • Human usage (what do we eat from the species?) • Description/illustration of fishing methods • Catch restrictions (Federal or State or both) • Reasoning for the catch restrictions that are in place (based on the organism's biology) • At least 2 colored, hand drawn pictures (one should be of the species) • Creativity, neatness, color, uniqueness 4. For homework, students are to research their organism and bring that information to the next class. They should also design a layout for their poster. <p>Day 1</p> <ol style="list-style-type: none"> 1. Students should design and construct their posters using the art supplies provided. Finished posters should be hung up around the classroom. 2. When students finish, they should walk around to the other finished posters and take notes on identifying: <ol style="list-style-type: none"> 1. A common theme for all the posters 2. Reasoning for catch restrictions

	<p>3. Any species that stand out among the others (they should identify the sturgeon as the fish that cannot be taken)</p> <p>3. All students must complete #2 before the end of class.</p>
Conclusion	<p>Day 2</p> <p>1. Discuss with the students:</p> <ul style="list-style-type: none"> • The common theme they found in all the different species of seafood (one can only land fish/other commercially important marine species that are above a certain size) • The reasoning for catch restrictions (The size is adequate for the species to have reproduced at least once before being taken) • Any species that stand out among the others (Atlantic sturgeon). Discussion should follow concerning the sturgeon's biology and fishing history (takes a long time to become sexually mature, harvested for their roe, etc). • Teacher should ask the class if the catch restrictions for Atlantic sturgeon, based on what they learned about the fish's biology, are enough to quickly cause a rebound in the population and why.
Standards	<p>Biology</p> <p>6.1 Explain how birth, death, immigration, and emigration influence population size.</p> <p>6.2 Analyze changes in population size and biodiversity (speciation and extinction) that result from the following: natural causes, changes in climate, human activity, and the introduction of invasive, non-native species.</p>

